COVID-19 TESTING RECOMMENDATIONS

State of Idaho Testing Task Force

January, 2021

Abstract

This document establishes the current testing landscape in Idaho and sets out an action plan to continue expanding testing to meet an ultimate target of testing 4-5% of population weekly. These recommendations are updated from this Task Force's guidance produced in May 2020, and this document can be viewed as an addendum to the original background information and context set out therein. We note that the science of testing for this condition will continue to evolve, as will knowledge around transmission and immunity, in particular as distribution of vaccines is carried out. For this reason, it will be important that these recommendations are part of a living document, requiring frequent and regular update.

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Executive Summary: State of Idaho Testing Task Force

The goals of this document are to:

1. Summarize actions taken since May 2020 to expand testing for COVID-19 in Idaho.
2. Set an expanded statewide goal to test 4-5% of the total population weekly
3. Establish current roadblocks and bottlenecks to testing expansion
4. Set out actions for implementation by the Department of Health and Welfare to address these roadblocks and help meet our target

In May 2020, when the testing task force recommendations were published, Idaho was completing an average of 6,400 tests per week. During the 4-week period prior to Christmas (selected due to data quality over the holiday period), Idaho completed an average of 39,132 PCR tests and 6,970 antigen tests per week. This represents a nearly 7-fold increase in testing rates since May, with the ability to cover over 2% of the population weekly. At our current testing rates, we should be able to test priority groups 1 and 2 that were identified and sized in the May 2020 testing task force report (see appendix A).

However, while our total capacity for testing may be sufficient, Idaho's testing rates are now too low to keep pace with the current spread of the virus. Positivity rates are frequently over 10% and even exceeded 20% in December 2020. Positivity rates above 10% indicate significant unidentified community spread, and a need for additional testing. To drive down positivity rates, we must increase testing. This will enable better virus surveillance, ensure more people isolate properly, and enable better treatment and cohorting practices in healthcare facilities.

States with best-in-class testing programs (e.g., New York) have achieved testing rates approaching 5% of population per week. **Setting a target of 4-5% of population per week – in line with the upper bound of what states have shown to be feasible – could drive positivity closer to recommended levels, improving our ability to identify outbreaks and to limit community spread.**

Testing delivery can be segmented into three components: sample analysis, sample collection, and patient demand. Currently sample analysis capacity does not appear to be a limiting factor in Idaho's testing (although this will need to be reassessed in future). **Sample collection is broadly accessible across the state, but rural and frontier areas may have poor access** that must be creatively addressed. Similarly, **some target populations may be under-sampled due to poor testing access or lack of awareness of how and where to get tested**. Finally, **patient demand appears to be a serious limitation**. Idaho's testing is currently reliant largely on organic demand from individuals to get themselves tested; guidance from PHDs and providers varies, and all PHDs reported experience of the public actively avoiding testing for coronavirus, citing attitudes such as "don't test, don't tell". Increasing public demand for testing is essential to meeting this 4-5% target.

Target populations for this expansion will evolve over time and should follow the priority groups set out in May 2020 (appendix A). Initial populations of focus (to be updated regularly as testing rates increase) are asymptomatic contacts of positive cases, front-line critical infrastructure employees, and rural and frontier counties, including Panhandle and Eastern Idaho regions.

To address testing limitations, we recommend the following actions (listed in order of priority, not exhaustive):

- **Authorize antigen tests for use in particular asymptomatic populations under specific conditions** to mitigate accuracy concerns (see BinaxNOW guidance document)

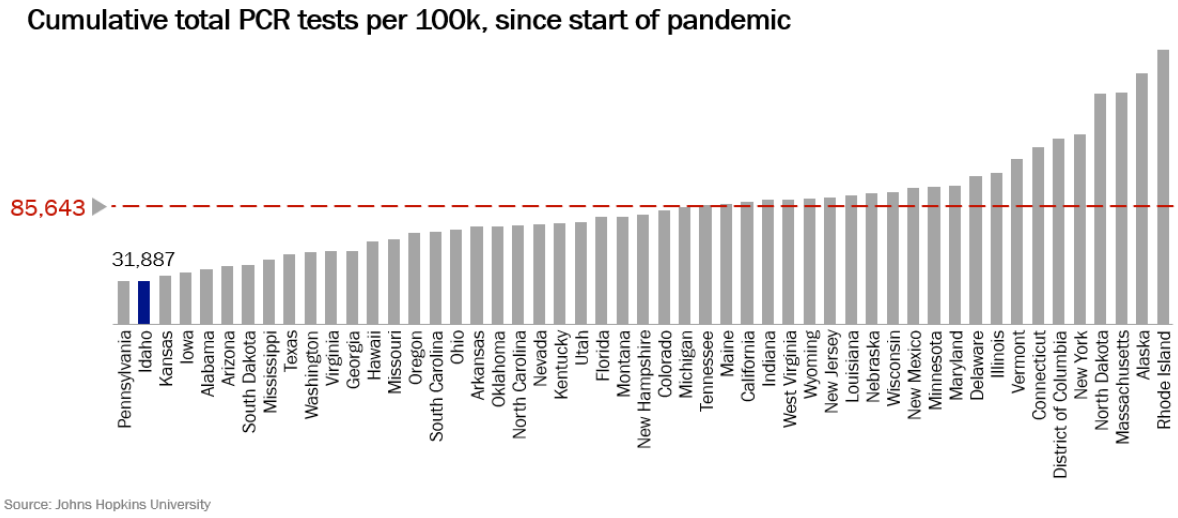
- **Distribute Abbott BinaxNOW™ COVID-19 Ag Card tests to Board of Pharmacy for use by community partners**, particularly in rural locations
- **Distribute Vault and Abbott BinaxNOW™ COVID-19 Ag Card tests to EMS agencies for serial testing of employees and in-transport testing of patients**
- **Enhance communications efforts, targeted to areas with lowest testing rates**; key pillars of plan focused on raising awareness of where and how to get tested (including tools such as: https://get-tested-covid19.org/), and benefits to communities (combatting misinformation or attitudes leading to testing reluctance)
- **Ensure state leadership continue emphasizing the importance of testing alongside vaccine rollout**; all messaging (e.g., Governor's press briefings) on actions to slow the spread should include testing (e.g., "Wear a mask, keep social distance, wash your hands, *get tested regularly*")
- **Collaborate with community partners (e.g., Crush the Curve) to deliver serial testing at large worksites / congregate living facilities**
- **Stand up community mass testing events, in collaboration with the Board of Pharmacy and College of Pharmacy, and in coordination with high throughput labs**; publicize events fully to drive community awareness and attendance, with a focus on front-line critical infrastructure employees, rural areas with lower testing rates, and small colleges
- **Ensure consistent guidance from providers and PHDs on when and how to get tested, encouraging the public to get tested regularly**; inconsistent delivery of guidance can undermine confidence in the importance of testing, and miss opportunities to test people in need. DPH should collaborate with PHDs to ensure guidance is understood and communicated
- **Support asymptomatic screening in non-CMS long term care facilities**; some non-CMS LTCFs may not screen asymptomatic staff or residents as regularly as possible and may need support
- **Include testing requirements in policies for opening of businesses or necessary gatherings**
- **Complete regional lab coordination program to maximize existing high throughput lab PCR capacity for community testing and minimize turnaround times**; ensure community samples are allocated to labs with most available capacity and fastest turnaround times
- **Package BinaxNOW and Vault tests for complementary use** (e.g., BinaxNOW for screening, Vault for follow up) in low testing access/rural settings
- **Maximize number of antigen tests administered by pharmacies to increase accuracy and reliability of antigen data**; pharmacies reliably report negative tests properly, while others may not, making antigen data less useful for tracking disease spread
- **Establish community testing sites at hospitals and affiliated clinics** to leverage courier services and maximize hospital lab capacity
- **Recruit volunteers for service opportunities at testing sites through religious and charitable organizations**; draw on organized groups to find volunteers to support staff at test sites
- **Provide more centralized support for PHDs through the above steps**; ease strain on LPH

Funding streams to support these actions are being established, though this document also contains broad best practices for funding testing efforts. Additional federal stimulus funding is expected (with Idaho allocated over $100M for testing, contact tracing, and other mitigation tools) and will likely be a key source of funds. Clear roadmaps for implementation of each action will also be developed to help meet our 4-5% target. More actions will also be implemented as barriers to testing are identified.

Existing testing capacity: Where, who, and how much are we currently able to test?

Current landscape and priorities

Idaho is currently testing about 2% of the state population per week using PCR tests alone (2.0% as of December 5th, although this dipped to 1.3% over the holiday period). This exceeds our original testing target of 2% monthly, representing a success relative to our initial objectives. However, compared to other states Idaho ranks poorly in terms of total PCR tests administered per capita since the start of the pandemic (see chart below). Idaho has completed 28,621 PCR tests per capita compared to a national average of 69,918, ranking the state 49th. Best in class states such as New York aim to test 5% of their population weekly – including symptomatic individuals and screening of asymptomatic populations to recognize cases as early as possible and limit transmission.



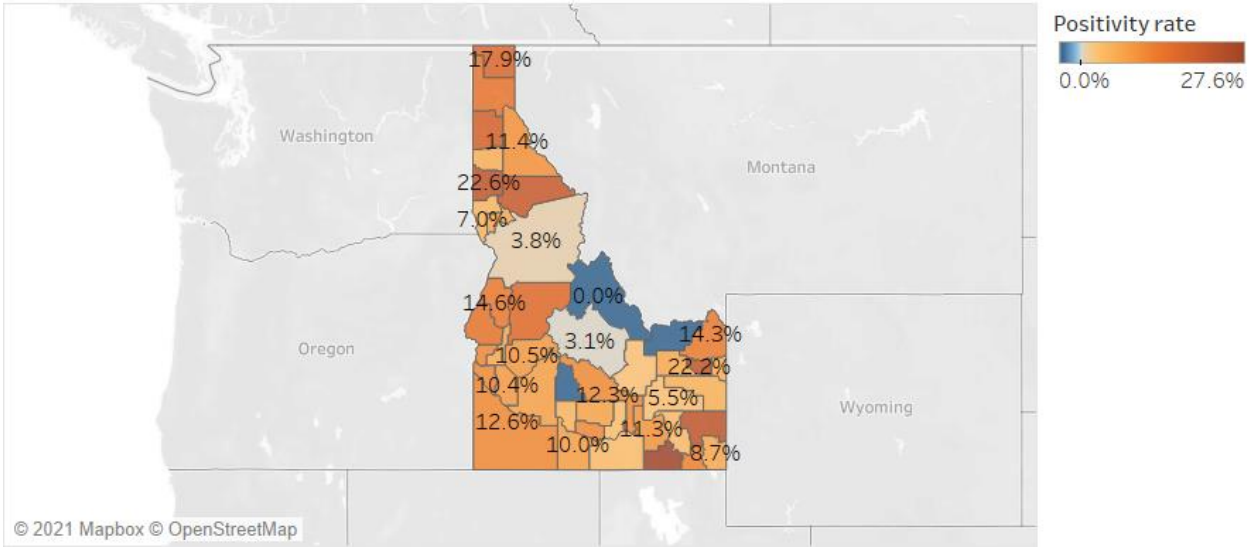
Data as of January 11th 2021

Source: https://coronavirus.jhu.edu/testing/states-comparison

Rising positivity rates also indicate our current testing capacity and mitigation efforts are insufficient. Idaho is primarily focusing on testing symptomatic individuals and will therefore have a high positivity rate, but with positivity rates reaching 20% statewide it is unlikely we are identifying even most of these symptomatic cases (Positivity rates >10% indicate insufficient testing). Testing rates must therefore be increased to ensure we identify those at greatest risk of spreading COVID-19 and protect vulnerable populations.

Antigen tests are being distributed and used more widely. However, many providers do not reliably report negative results, meaning data quality is poor and it is a challenge to interpret trends in antigen results. As is described in the “actions” section of this document, this should be resolved to maximize impact of these tests for statewide decision making.

Positivity rate (Target <3%)

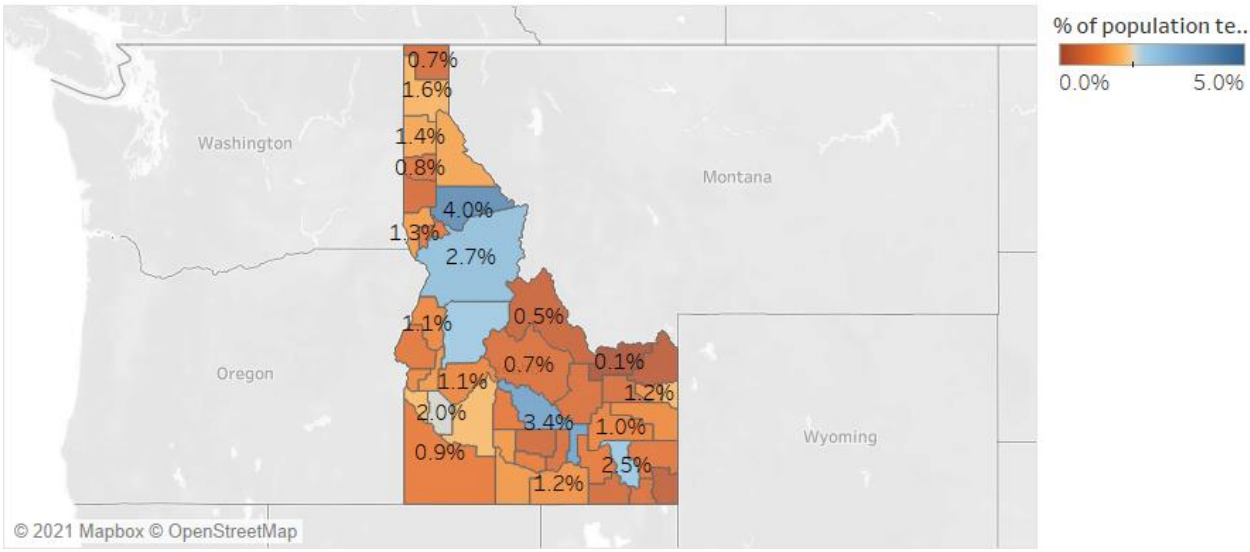


Statewide total = 11.4%

Data as of January 16th 2021; <3% target based on Harvard Global Health Institute guidance (https://globalhealth.harvard.edu/new-testing-targets-as-covid-19-outbreaks-grow-more-severe-most-u-s-states-still-fall-far-short-on-testing/)

Additionally, while Idaho has achieved a statewide average of testing >2% of the population weekly, more than 20 counties in Idaho are reporting <2% of the population tested weekly, shown in the map below (counties below 2% are in shades of orange). While testing in population centers such as Ada County and Kootenai County is likely to be higher (since viral spread is likely higher in more densely populated areas), it is crucial to provide proper access to more rural counties given current estimates of disease prevalence and positivity rates.

% of population tested weekly (Target >2%)



Statewide total = 1.6%

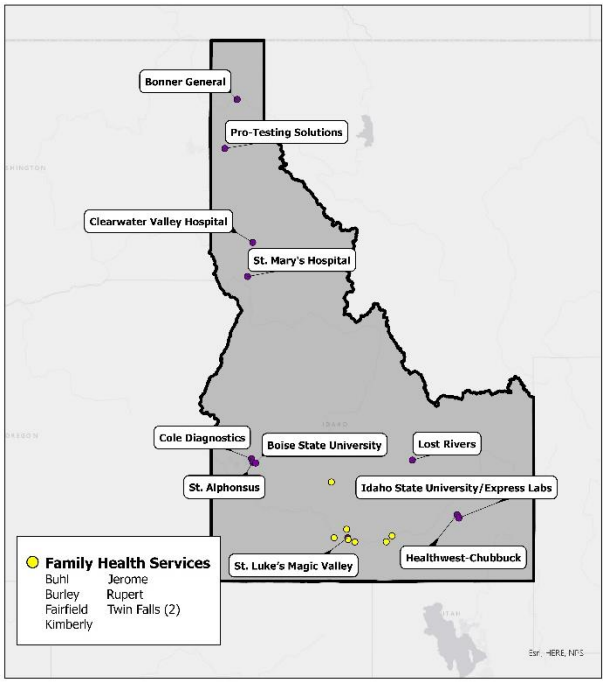
Data as of January 16th 2021; >2% target based on May 2020 recommendations (https://rebound.idaho.gov/wp-content/uploads/testing-recommendations.pdf)

Efforts to expand testing capacity

Idaho's state-led efforts to expand local testing capacity thus far have focused on five main elements:

1. Regional lab capacity investment
2. Contracted reference laboratories to support long term care facility surveillance testing
3. Distribution of federally supplied and state purchased Abbott IDNow tests
4. Distribution of federally supplied Abbott BinaxNOW tests
5. Purchase of Vault Health home PCR test kits

Other efforts have been used by private sector and community partners, but this document aims to highlight these five state-led initiatives.



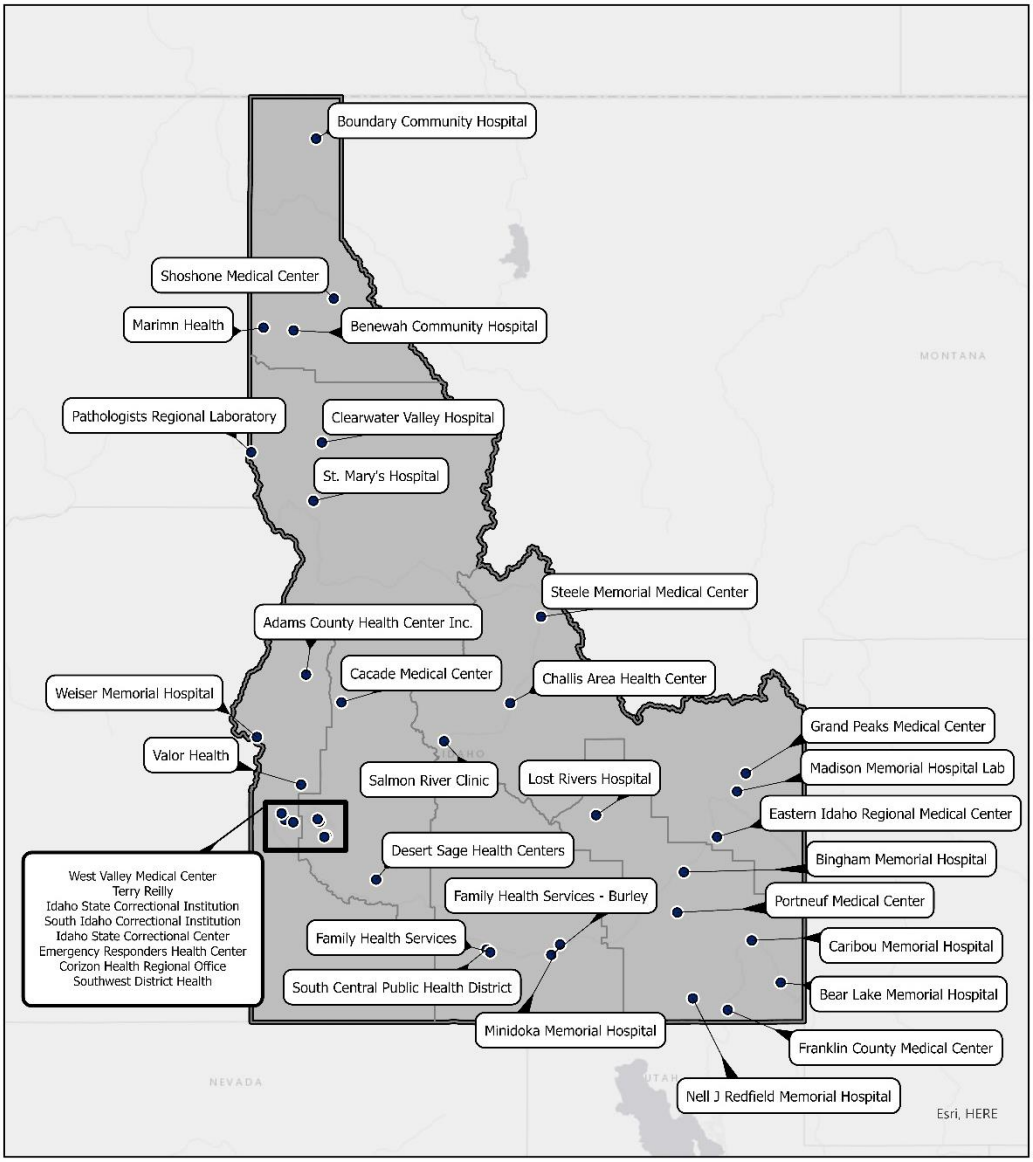
Regional lab capacity investment

Idaho provided $3,000,000 in total funding through memoranda of agreement (Idaho State University and Boise State University) and subgrant awards to build and expand lab capacity by December 30, 2020. As shown on the map below, funds were allocated to hospitals, private labs, universities, and clinics in every region of the state. These funds were used to add additional high through-put PCR lab capacity (Bonner General, Pro-Testing Solutions, Boise State University, St. Alphonsus, St. Luke's Magic Valley, and Idaho State University/Express Labs), and enhanced sample collection capability. With this investment, Idaho should have substantially more local PCR testing capacity in 2021 for all regions of the state.

Abbott IDNow

Since April 2020, the federal government has provided a weekly allocation of approximately 1,200 Abbott IDNow tests. The Idaho Bureau of Laboratories has been distributing these tests statewide, with most of the tests being sent to rural critical access hospitals (distribution locations shown in the map below). The federal contract for Abbott IDNow tests expired at the end of 2020. The state has contracted with Abbott rapid diagnostics to continue this service for the first 6 months of 2021. Abbott can provide Idaho a monthly allocation of 2,508 tests for the next 6 months for a total of 15,048 tests.

These tests will continue to be distributed through June 2021, receiving approximately half the current 2020 monthly allocation each month in 2021.



Abbott BinaxNOW™ COVID-19 Ag Card

Beginning in September, the federal government began distributing 150 million Abbott BinaxNOW™ COVID-19 Ag Card tests to states. IDHW has been allocated ~530,000 of these tests, of which over half have been received to date. To date, most tests have been distributed through local Public Health Districts to various target populations. The BinaxNOW™ COVID-19 Ag Card have a shelf life of approximately 6 months and could allow us to significantly expand access in rural and frontier areas.

Home collected saliva-based PCR

The state has contracted with Vault Health to purchase saliva-based PCR tests that can be administered at home and mailed to labs for analysis. The state has purchased a total of 165,137 Vault tests for $18 million. Currently, IDHW has been distributing received tests to PHDs or directly to local partners for use. Remaining tests received from this contract will form an important piece of Idaho's efforts to expand testing.

Why is more testing needed?

Testing for SARS-CoV-2, the virus that causes COVID-19, is not a strategy that stands alone, but is critically important because it is directly related to other elements of a comprehensive COVID-19 control strategy. Identifying positive cases increases the likelihood those individuals will self-isolate, as well as enabling contact tracing that can identify other exposed individuals at risk for infection before they transmit the virus further. In the case of COVID-19 this is crucial, because many cases are likely to be asymptomatic, meaning symptoms cannot be used directly to understand whether a person is positive. Even for those who test negative, the sample collection event can become a prime opportunity for education on best practice public health behaviors.

Impact of vaccines on testing demand

Vaccine distribution and administration is now underway, with two vaccines to date having received FDA emergency use authorization. While this is excellent news that marks a new chapter in this pandemic, there is clear reason to believe testing capacity will be critical into 2021 and potentially beyond. Vaccine distribution and administration will be a process that takes place over several months, with Idahoans needing broad access to testing to identify cases and isolate infected individuals throughout that period. As vaccines ramp up, there will be continued demand for testing to support acute care facilities, employers, larger events, and potentially prioritize vaccine allocation (those who have recently tested positive may get the vaccine later if supplies are constrained). Even once vaccines have been broadly distributed, testing will be required to provide appropriate healthcare (similar to how diagnostic flu tests are used today), to assess post-vaccine immunity, and to support unvaccinated populations. **As such, while vaccines are a powerful tool to navigate this crisis, they will not eliminate need for testing as part of a comprehensive public health response.**

However, we also recognize that needs for asymptomatic screening testing may change as a result of vaccination. As such, target testing rates should be regularly revisited as our understanding of the impact of vaccines on testing evolves.

Current barriers to testing

To broadly identify barriers to testing, this document segments testing into three key components: sample analysis, sample collection, and patient demand for testing. This section describes the current situation in each component to establish the barriers in need of resolution.

Sample analysis

We do not believe sample analysis capacity is currently a bottleneck to Idaho's testing. As described in the opening section of this document, Idaho has spent over $3M on subgrants to increase high throughput lab capacity for molecular PCR tests. Idaho also has access to rapid PCR tests (eg., Abbott IDNOW), at home PCR tests (e.g., Vault), and a large supply of rapid antigen tests (e.g., Abbott BinaxNOW™ COVID-19 Ag Card tests).

Idaho is working to clearly define our current lab PCR capacity. As testing rates rise, it will be essential to understand when we are hitting our capacity ceiling and determine what additional capacity investments should be made.

Sample collection

Sample collection occurs at a variety of locations across the state, operated by healthcare providers, PHDs, pharmacies, groups such as Crush the Curve Idaho, and others. Access is concentrated in more populous areas such as southwest Idaho, but with more limited availability in rural regions.

Primary barriers are a lack of awareness of sample collection sites and how to access testing, and a lack of service to some rural areas and target populations. The public need to be aware of new and existing test sites to maximize turnout, and areas with low testing rates should be investigated to understand current testing sites. Where there are significant gaps, DPH should collaborate with PHDs and community partners to stand up and support additional testing opportunities for the public.

Testing is most sparse in PHD 7 (Eastern), as well as in PHD 1 (North) and PHD 2 (North Central). Target populations across the state are asymptomatic contacts of positive cases, and frontline critical infrastructure workers (who we believe are under-sampled). Asymptomatic screening of these groups would be an effective means of containing spread.

Patient demand

Patient demand appears to be the most significant barrier limiting testing in Idaho today. Reports from PHD indicate many people are actively avoiding testing, either because they do not believe the virus is real, or do not want to be required to isolate if they test positive. Attitudes such as "Don't test, don't tell" are pervasive, resulting in low organic demand for testing.

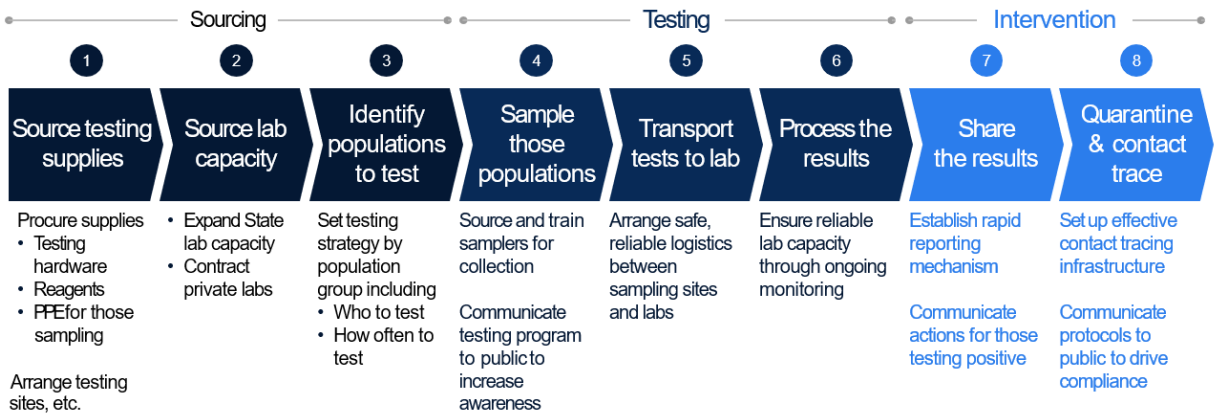
To effectively increase testing rates, we must combat these attitudes. A robust communication plan will be needed to change the narrative around testing: combating misinformation and emphasizing it is a critical action that will protect oneself, serve one's community, and help enable a safer return to normal activities. The public should be aware that testing is free, easy, not invasive or painful, and can be scheduled simply. Testing should be considered habitual, alongside other staple mitigation tools such as mask wearing, handwashing, and social distancing. Tools such as https://get-tested-covid19.org/ allow patients to find their nearest testing center with capacity and schedule an appointment if they are eligible – the public should be aware of such tools, with leadership modelling correct behavior wherever possible. Lastly, choosing the correct messengers will be a key detail of any such plan; physicians and trusted medical sources should be used wherever possible, with other community or political leaders helping coordinate opportunities for the public to hear from the most trusted and authoritative medical experts.

Proposed actions to meet testing target

This section details the actions we plan to take to increase testing and meet our new 4-5% target. These actions are listed in order of priority, but do not need to happen in sequence; we should move forward with as many actions as possible in parallel.

Testing supply chain

Between sourcing and intervention, the testing supply chain is highly complex. To establish the "how" to expand testing, it is important to set out this supply chain properly. As plateaus are reached in the expansion process, we should return to this supply chain and reassess to find further barriers that can be addressed to expand capacity.

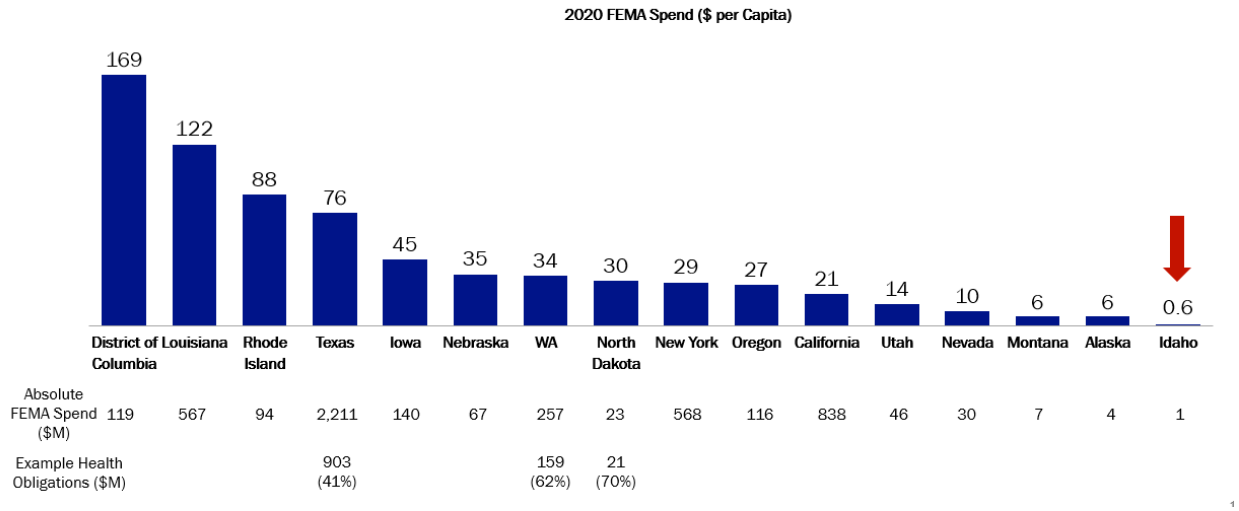


Funding

Testing for symptomatic patients is covered by health insurance, while asymptomatic testing costs may be out of pocket for patients. To maximize testing access and uptake, Idaho should make every effort to provide free testing for those who do not have insurance coverage for testing.

The cost to the state for testing in different contexts varies based on the reimbursements that may be available (e.g., from private insurers, Medicaid, federal grants, etc.). To maximize the number of tests delivered from each dollar spent by the state, we should **focus resources where reimbursements are as high as possible, while still delivering testing to our target populations across geographic regions of Idaho. This will mean the cost to the state is reduced and we get more "bang for our buck". at the lowest % of the total cost of testing available.**

Idaho should also explore federal multipliers wherever possible when spending state funds on testing (e.g., FEMA cost recovery for emergency protective measure costs). These funds can often be accessed with little or no downside and enable far greater spending on testing than existing funding streams. Idaho is currently accessing these funds at significantly lower rates, particularly compared to states with frequent experience managing natural disasters (e.g., Texas, Louisiana), as seen in the chart below.



Idaho has invested all CARES Act federal funds allocated by Idaho's Coronavirus Financial Advisory Committee (CFAC) to testing for 2020, most recently directing $5 million to expand our contract with Vault. Entering 2021, we should look to allocate funding across the actions detailed below, with a goal of aggressively expanding testing while focusing available capacity on at-risk and high priority populations.

Funding plans for the actions below are being developed, taking into account both the extended deadline for CARES Act funds, and any additional federal funds that may be available under a new stimulus bill. This should ensure funds are spent strategically, with an overall goal and clear process to deliver in mind.

Actions to expand testing

Overall perspective

The following actions aim to address the barriers identified in the previous section. Clear implementation plans should be developed for each to help us stay on track and deliver the desired testing expansion.

These actions are prioritized for implementation based their potential impact and ease of implementation (see example matrix and key factors in prioritization below) and are **not exhaustive**.

These actions should be implemented as quickly as we can, and in parallel if possible; we don't need to complete one to begin working on another, assuming we have capacity to do so.

Test type allocation should be determined based on the sensitivity, specificity, and turnaround time requirements for a particular population group. Point of Care (POC) testing should largely be provided through antigen tests, and PCR tests should be allocated based on the impact of a <24-hour turnaround compared to a 24-48 hour wait for a result.

Prioritization framework based on ease of implementation and potential impact

4

Ease of implementation

Inputs:

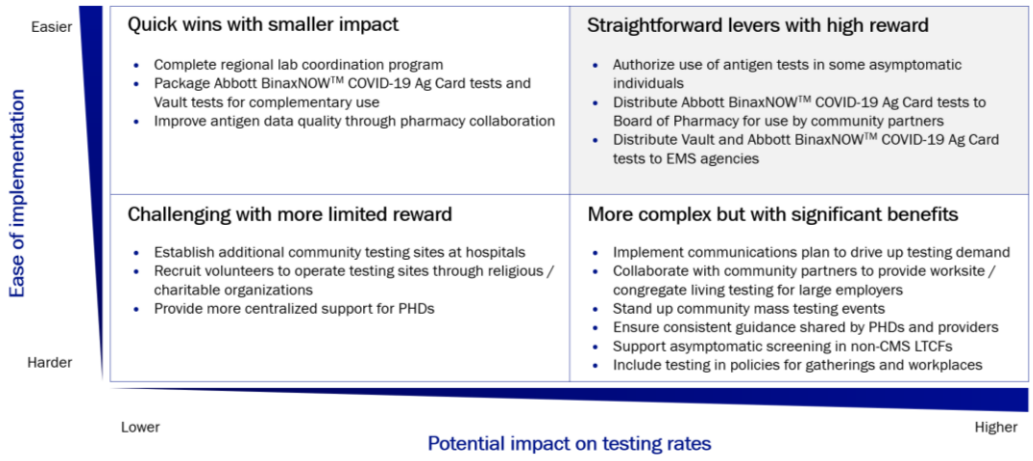
- Qualitative assessment of the complexity and number of steps required to implement the lever
- Degree of dependence on and reliability of external partners
- Estimated level of cost to implement

Potential impact on testing rates

Inputs:

- Qualitative estimate of scale of increase in testing rates as a direct / indirect result of lever being implemented
  - *E.g., number of BinaxNOW tests distributed to partners; potential increase in public demand for testing)*
- Assessment of impact may be relative, and judged to be higher if current rates in target population/region are particularly low

Expansion levers prioritized by potential impact and ease of implementation



Authorize antigen tests for use in specific asymptomatic populations under clear conditions

The Governor's testing task force has approved updated guidance for use of antigen tests that creates potential for use in asymptomatic close contacts or as part of serial testing, recognizing that this constitutes "off label" use. This change in guidelines will accelerate distribution and ease pressure on PHDs and providers to control distribution to only very targeted groups.

In particular, it creates opportunities for serial testing in small colleges, schools, and in rural areas where close contacts of positive cases may not otherwise readily have access to testing.

Idaho should take the following immediate steps:

1. **Clarify the new guidance to PHDs and respond to any increase in queries for new BinaxNOW tests**
2. **Share this guidance with providers and offer Q&A opportunities to ensure it is fully understood**

Benefits: increased sampling of population, more effective distribution of existing supply

Distribute Abbott BinaxNOW™ COVID-19 Ag Card tests to Board of Pharmacy for use by community partners, particularly in rural locations

Work is ongoing with the Idaho Board of Pharmacy (BoP) and College of Pharmacy to leverage their network to distribute and administer testing across Idaho. BoP has agreed to pay administrative fees, making this a logistical exercise that needs to be closely coordinated with partners at the BoP and their members at the College of Pharmacy.

DPH should aim to deliver significant volume of BinaxNOW tests (currently stored at the HP Campus) that can be administered by BoP pharmacies before the tests expire in Q2 2021. Particular focus should be placed on delivering tests to pharmacies in rural areas, where access to testing is currently more limited. This should be completed as a priority, offering support to BoP as needed to deliver these tests as rapidly as possible.

Benefits: more effective distribution of existing supply, outsourcing of sample collection

Distribute Vault and Abbott BinaxNOW™ COVID-19 Ag Card tests to EMS agencies for serial testing of staff and POC testing of patients during transport

EMS workers are critical infrastructure employees, essential to patient care and the mitigation of strain on hospitals. They are also at increased risk of exposure to coronavirus. Serial testing of these employees will enable a safer workplace, resulting in greater staff availability for this critical function.

Additionally, once EMS agencies are granted CLIA waivers for testing, they can also test patients during transport. This will allow for faster diagnosis and help prepare destination facilities for a COVID patient if needed.

Pre-filled CMS-116 CLIA application forms have been shared with all state EMS agencies and administrators. Once completed, **DPH should begin shipping BinaxNOW antigen tests (for serial testing of employees and POC testing of patients during transport) and Vault home PCR tests (for confirmatory tests if unexpected antigen results are returned) to EMS agencies.**

Benefits: improve safety of EMS workplace and availability of critical EMS staff, provide POC testing to patients before hospital arrival

Enhance communications efforts, targeted to areas with lowest testing rates

Continued education is needed to support the public, businesses, industry, schools, and others. It appears the greatest current limiting factor in Idaho's testing is insufficient testing demand from the public. Specifically, there is reason to believe some members of the public are skeptical about getting tested for COVID-19, and that the public may not be aware of the easiest locations to get tested.

As such, any expansion in testing capacity must also be paired with robust messaging to the public, emphasizing the value and importance of getting tested, combatting misinformation, and driving up demand for testing in all forms. ONE Idaho and other messaging campaigns are producing excellent content that must be built on and widely shared to support public awareness.

This rhetoric should be included in Governor Little's press conferences where possible as a clear message for Idahoans, emphasizing that testing is a way to stand up and support your community, enabling a safer and faster return to normal life. All messaging (e.g., Governor's and DPH's press events) on actions to slow the spread should include testing (e.g., "Wear a mask, keep social distance, wash your hands, *get tested regularly*"), and the public should be aware that testing is free, non-invasive, and easy.

DPH should publicize free tools such as https://get-tested-covid19.org/ and https://carbonhealth.com/coronavirus/covid-19-testing-centers/Idaho, which enable users to easily find their nearest testing center and learn about requirements to get tested.

If possible, we should eliminate all potential obstacles to testing, removing requirements for identification, insurance, or other papers – particularly since these factors may discourage at-risk minority individuals.

Partnerships will also be critical in hard to access populations or those where trust in national messengers is particularly low. Local leaders will be critical in "getting out the test".

The DPH testing team should collaborate closely with the DHW Communications group to develop and roll out critical messaging to increase testing demand.

Benefits: increase demand for testing and adoption of desired public health behaviors

Collaborate with community partners to provide worksite / congregate living testing for large employers

Worksites represent another clear way to easily group people for targeted screening testing. Employers have a clear incentive to test their employees if they are requiring them to be in-person; testing will make employees feel more comfortable at their worksite and will limit the potential for outbreaks that could damage productivity and result in broader business shutdowns.

DPH should work with community partners, such as Crush the Curve Idaho and the Idaho Retailers Association, to deliver serial antigen testing using BinaxNOW tests for use in large worksites, such as food processing facilities and factories. This would build on existing collaborations and should ramp up testing effectively in these populations while outsourcing logistics through experienced and proven partnerships.

Benefits: increase sampling and limit spread in large worksites, effectively utilize serial testing for screening purposes

Stand up community mass testing events, in collaboration with the Board of Pharmacy and College of Pharmacy, and in coordination with high throughput labs

As an extension of the collaboration with the Idaho Board of Pharmacy mentioned earlier, it may be possible to stand up community mass testing events (focused on rural and high-positivity areas) or "events" to support small colleges or other congregate living settings. DPH should collaborate with BoP and other partners as needed to deliver these test sites.

The test sites will need supply of tests, staffing, coordination with employers / colleges / community leaders, and communications to ensure public awareness.

Mass community testing sites will likely need to use largely PCR tests, since antigen tests may not be appropriate for use in populations with unknown or low pre-test probabilities. Antigen tests may be appropriate if a person has been a close contact of a positive case, but since this is challenging to verify and a rapid result creates a distorting incentive, allocation of antigen tests in these settings will need to be cautious. However, worksites, small colleges, and congregate living environments can use serial testing, enabling more widespread use of antigen tests for these testing locations. Coordination will be needed with local high throughput labs to handle PCR volume (including follow up PCRs after antigen tests).

Staffing for these sites can be drawn from the College of Pharmacy but may need to be bolstered with support from other sources, especially since many pharmacists are also involved in the vaccine roll-out. Support could come from National Guard (if available, pending other priorities), from Medical Reserve Corps volunteers, or potentially from religious / charitable organizations (detailed later in this document).

Coordination will be needed with local community leaders (including local public health authorities) to raise awareness, drive attendance, and assist with logistics. Testing at small colleges should be coordinated with college leadership; testing in worksites should be explored with Pam Eaton and the Idaho Retailers Association.

Lastly, communications will be needed to publicize events and drive community awareness and attendance (see above section on communications for more detail).

Benefits: increase testing rates and sampling of under-sampled populations

Ensure consistent guidance from providers and PHDs on when and how to get tested, encouraging the public to get tested regularly

Reports from PHDs indicate guidance given to patients by local public health and providers may not always be consistent, with advice varying based on perceived testing capacity / turnaround times, volume of patients, and other factors. Inconsistent delivery of guidance can undermine confidence in the importance of testing and result in missed opportunities to test people in need. **DPH should**

collaborate with PHDs to ensure guidance is understood and communicated properly by all relevant stakeholders.

Benefits: increase demand for testing and adoption of desired public health behaviors

Support expanded asymptomatic screening in non-CMS long term care facilities

Due to high potential for transmission and the high mortality risk of many residents, long term care facilities (LTCFs) must be a high priority for COVID-19 screening testing. In Idaho, >5% of cases and >40% of COVID-19 deaths have been associated with LTCFs. Testing is a means of heavily mitigating risk of asymptomatic transmission, including between LTCF staff and residents, yet current testing in some non-CMS LTCFs does not include asymptomatic screening. **DPH should assess whether any additional steps can be taken to support non-CMS LTCFs in increasing testing to ensure proper asymptomatic screening of staff and residents (where needed).**

Benefits: increased sample collection, support at-risk population

Include testing in policies for gatherings and workplaces

Policy levers can also be effective to drive up testing rates. The public and businesses are keen to return to normal activities, and testing can provide a safer means of gathering when needed. By **including mandatory testing requirements in policies for opening of businesses or necessary gatherings**, Idaho can boost testing rates while enabling people to gather for important social activities more safely.

Proper messaging will be required to ensure people know the limitations of testing as a mitigation tool, and policies should be carefully crafted to balance these risk considerations, but it offers a valuable tool at the executive or legislative level.

Benefits: improve safety of necessary gatherings, increase testing rates in populations at elevated risk of transmission

Complete regional lab coordination program

A regional lab coordination program is underway, in which all enrolled labs would report daily via the Idaho Resource Tracking System (IRTS) on current capacity and turnaround times for PCR tests. These data should then be shared with all enrolled test providers, along with guidance for how to submit samples to each lab. Providers can then identify the labs with the most efficient combination of shipping time, capacity, and turnaround time, enabling Idaho to maximize existing lab capacity.

This regional lab coordination dashboard for providers, complete with submission criteria/guidance from labs should be developed and live as soon as possible.

Benefits: maximize available testing sample analysis supply

Package BinaxNOW and Vault tests for complementary use

BinaxNOW tests can be effective in screening asymptomatic populations, particularly in regions where sampling for PCR testing is unavailable and lab capacity is limited. To improve results, these tests can be

complemented with a follow up PCR test for those who test positive, or symptomatic individuals who test negative. Vault tests could enable PCR testing in more rural communities, potentially acting in concert with BinaxNOW antigen testing. We also have a much smaller volume of Vault tests compared to BinaxNOW, meaning they are best used when targeted to specific patients.

As such, packages of BinaxNOW and Vault tests could be bundled (potentially with a ratio of 20 Vault tests for every 100 BinaxNOW tests, based on regional positivity rates; as allowed by palette sizes) and shipped to rural PHDs, pharmacies, and critical access hospitals for easy use in communities with low access to testing.

Benefits: increase supply of testing in areas with low access

Maximize number of antigen tests administered by pharmacies to increase accuracy and reliability of antigen data

Antigen testing data are currently believed to be incomplete due to negative results not reliably being reported. However, the public health benefits of testing are greatest when we have full transparency into all data and trends, enabling more effective targeting of limited resources and maximizing impact.

Since pharmacies more reliably report negative results, more extensive use of antigen tests cards in these settings will have the added benefit of increasing completeness of antigen test data.

Benefits: improved data quality to maximize downstream impact and availability of testing

Establish community testing sites at hospitals and affiliated clinics

Many hospitals have on-site sample analysis capabilities, which are largely used to test admitted inpatients for cohorting or safety around procedures. However, in many cases this testing capacity may be underutilized. Hospitals that have suspended elective procedures are also likely to be suffering financially and to have interest alternate sources of revenue, as well as having the laboratory resources and physical space required to conduct community testing.

Idaho could **explore a program of paying costs for hospitals to open testing sites in parking lots and areas immediately surrounding hospitals, utilizing unused lab capacity for additional testing.** These test sites would be staffed by any available medical staff – with support from National Guard or MRC / other volunteers if needed – and could be funded by available testing sub-grants. Idaho's excellent relationships and partnerships with hospitals to date may also help deliver this testing solution.

Benefits: increased sample collection and analysis, increased demand

Recruit volunteers for service opportunities at testing sites through religious and charitable organizations

Religious and charitable organizations, such as The Church of Jesus Christ of Latter-day Saints or the Catholic Church have a significant and highly organized population in Idaho. It is feasible that leadership would be supportive of a program to offer service opportunities to members interested in volunteering

at sample collection sites. This would enable greater sample collection, often in communities that may otherwise be challenging to sample adequately where the Church is a trusted local voice. The same may be true of other religious or charitable organizations.

As such, **Idaho could seek collaboration with the Catholic Church, Church of Jesus Christ of Latter-day Saints, or other religious and charitable organizations to collect additional volunteers to staff existing or new sample collection sites (including satellite offices for rural PHDs).** Volunteers would require medical oversight (either from clinicians of pharmacists), training, PPE, and supplies for sample collection, and could support mass testing sites (detailed earlier in this document). This pool of volunteers could also be used to support local regions if targeted testing is needed to suppress outbreaks as they arise in future.

Benefits: increase sample collection, create centralized and flexible capacity for testing sites

Provide more centralized support for PHDs

Testing subgrants have been allocated in many cases to local PHDs, with the goal of devolving testing expansion to local regions. However, in many cases these PHDs are not properly staffed to handle the overwhelming tasks of responding to this pandemic, resulting in bottlenecks at the local level.

To relieve pressure on under-resourced PHDs, the state should push for greater centralization of overall testing strategy and gain benefits from scale, while maintaining close collaboration with PHDs for administering of tests. Feedback and open communication between PHDs and IDPH is crucial to ensure all perspectives are included in strategy. However, the state can bring greater standardization, strategy, and resources to bear on statewide issues such as testing in a mutually beneficial way.

In addition to more explicit coordination between PHDs, potential centralized support could include:

- A central pool of sample collection volunteers, to be allocated to hotpots for mass testing as needed (see above)
- Distribution of supplies direct to standardized lists of local partners, eliminating the need for PHDs to play middle-man (would require a DPH person to outreach to sites where tests are needed and open contact with local delivery partners)
- Communications plans designed to drive up demand for testing, in collaboration with PHDs to identified trusted local messengers (see above)
- Regional lab coordination (see above)
- Produce a single dashboard to provide a single source of testing and case data for PHDs, instead of PHDs conducting individual and siloed data analysis

Benefits: more strategic spending, lessen strain on local public health and release bottlenecks

Appendix A: May 2020 recommended testing tiers

Priority 1 (approximately 16,900 tests/week)

Priority	Groups
	SYMPTOMATIC INDIVIDUALS
1	• Hospitalized patients • Healthcare workers • First responders
1	• Residents in long-term care facilities with symptoms, or who are close contacts of a confirmed case or part of an outbreak investigation • Patients 65 years of age and older with symptoms • Patients with underlying conditions with symptoms
1	• Inmates and staff of correctional facilities • Symptomatic residents and staff of residential care facilities • Residents and staff of homeless and other group shelters • Other vulnerable populations in crowded living conditions
1	• Critical infrastructure workers with symptoms • Congregate essential business workers • Essential workers
1	• Contacts of confirmed cases • Contacts of probable cases • Prioritize by exposure assessment
	ASYMPTOMATIC INDIVIDUALS
1	Hospitalized patients (see notes)*
1	All incoming residents and new staff in: • Long-term care facilities • Correctional facilities • Residential care facilities • Homeless shelters • Other congregate housing of vulnerable populations
1	• Asymptomatic contacts as part of a cluster investigation • Asymptomatic contacts in long term care facility including residents and staff • Asymptomatic contacts of confirmed cases • Broaden testing outreach in community when cases have occurred in people who come from racial and minority ethnic groups disproportionately affected by adverse COVID-19 outcomes in underserved communities (e.g. African Americans, Hispanics and Latinos, Native American Tribes)
1	• Patients before potential aerosol-generating procedure

Priority 2 (approximately 26,000 tests/week)

Priority	Groups
	SYMPTOMATIC INDIVIDUALS
2	People with frequent and close contact with international travelers or large numbers of the general public
	ASYMPTOMATIC INDIVIDUALS
2	Residents and staff in congregate living facilities with most vulnerable populations (long-term care facilities, correctional facilities, residential care facilities, homeless shelters) as part of routine surveillance
2	Employees of critical infrastructure/essential businesses in congregate settings, especially in close proximity with suboptimal ventilation (e.g., meat packing plant)

Priority 3 (approximately 43,000 tests/week)

Priority	Groups
	SYMPTOMATIC INDIVIDUALS
3	All other workers and public
3	All specimens submitted for seasonal influenza surveillance
	ASYMPTOMATIC INDIVIDUALS
3	Employees of critical infrastructure or essential businesses with high volume public-facing working conditions (e.g., large retail grocers)
3	Healthcare workers, first responder teams, and mortuary staff

Priority 4 (approximately 60,000 tests/week)

Priority	Groups
	ASYMPTOMATIC INDIVIDUALS
4	• Schools with congregate living conditions (e.g., dormitories or barracks) • Teachers in schools where classroom size exceeds 10 people • Daycares exceeding 10 children
4	Employees of non-essential businesses with congregate or public-facing working conditions (e.g., restaurants, high volume retail)
4	Participants in group guided travel where cloth face coverings and maintaining physical distance of 6 feet apart is not practical (e.g., river rafting)

Priority 5 (approximately 5,000 tests/week)

Priority	Groups
	ASYMPTOMATIC INDIVIDUALS
5	Athletes prior to any collision or contact sporting event (e.g., football, wrestling, basketball, martial arts)
5	Travelers returning from areas of community transmission via commercial carrier
5	Sporting Events (Attendees, staff)
5	Non-contact Athlete/Performance Groups

Testing Groups and Priority Tiers

These recommendations organize molecular testing into four groupings of individuals based upon core principles. In addition, across the groups, priority tiering has been applied due to current constrained testing capacity. It would be anticipated that Tier 1 needs would be met before Tier 2 needs are met, and so on. Please see the previous page for a summary of Tier recommendations. No hierarchy is implied by the order that groups are listed within priority group categories

Group A: Test all symptomatic people (nucleic acid or antigen test)

Consistent with the first recommendation in the federal guidelines and applies to all OSHA risk strata.

Total Estimate: 3,600 per week (range 2,400-17,200)

Priority	Objective	Groups	TAT Need	Estimated Numbers per week	Proposed Collection Site	Proposed Testing Laboratory Type	Additional Notes
1	Protect healthcare workers and first responders	• Hospitalized patients • Healthcare workers • First responders	Same day	1,200	Healthcare facility	High throughput, local	
1	Ensure that those who are at highest risk of complication of infection are rapidly identified and appropriately triaged	• Residents in long-term care facilities with symptoms, or who are close contacts of a confirmed case or part of an outbreak investigation • Patients 65 years of age and older with symptoms • Patients with underlying conditions with symptoms	Same day	800	• On-site collection via RRT, if available facility • Healthcare facility	High throughput, local	All symptomatic residents and staff in LTCF, as outlined by Long-term Care Facilities Strike Team
1	Limit COVID-19 in congregate settings with vulnerable populations	• Inmates and staff of correctional facilities • Residents and staff of residential care facilities. • Residents and staff of homeless and other group shelters • Other vulnerable populations in crowded living conditions	Hours for incoming residents and inmates	800	On-site	• Point of care if probability of false negatives is minimal • High throughput, local	
1	Early detection and control in critical	• Critical infrastructure workers with symptoms	Same day	400	On-site if available or healthcare facility	High throughput, local	

Priority	Objective	Groups	TAT Need	Estimated Numbers per week	Proposed Collection Site	Proposed Testing Laboratory Type	Additional Notes
	infrastructure and essential businesses	• Congregate essential business workers • Essential workers					
1	Control spread from public health clusters and selected contact tracing	• Contacts of confirmed cases • Contacts of probable cases • Prioritize by exposure assessment	Same day	200	• Home sampling • Healthcare facility	High throughput, local	
2	Early detection and control in medium exposure risk worksites	• Frequent and close contact with international travelers • Frequent and close contact with large numbers of the general public	Same day to days	50	On site	High throughput, local or commercial	
3	Detection and control in low exposure risk worksites	All other workers and public	Days	1,000	Home or onsite	High throughput, local or commercial	
3	Assess seasonality and geographic distribution	All specimens submitted for seasonal influenza surveillance	Days	500	Healthcare facility	Standard procedures at Idaho Bureau of Laboratories	

Group B: Test all asymptomatic people in certain situations (nucleic acid or antigen test)

Consistent with the federal guidelines and applies to confirmed contacts, patients in healthcare facilities, people upon admission to congregate living facilities, and those identified as priority by public health officials.

Total Estimate: 12,500 per week (range 10,000-16,000)

Priority	Objective	Groups	TAT Need	Estimated Numbers per week	Proposed Collection Site	Proposed Testing Laboratory Type	Additional Notes
1	Protect healthcare workers and other patients; conserve PPE and isolation beds through cohorting	Hospitalized patients	Same day	2,000	Healthcare facility	High throughput, local	Potentially apply to all acute care admissions as determined by community activity, hospital activity, and cohorting needs.
1	Limit introduction into congregate settings with vulnerable populations	All incoming residents and new staff in: • Long-term care facilities • Correctional facilities • Residential care facilities • Homeless shelters • Other congregate housing of vulnerable populations	Hours	500	• Healthcare facility if transfer • Onsite	Point of care if probability of false negatives is minimal	All new patient admissions to facilities be tested for SARS-CoV-2 should be included in priority 1 category, as per Long- term Car Facilities Strike Team
1	Control spread from public health clusters and contact investigation Early detection in vulnerable populations with outcome disparities	• Asymptomatic contacts as part of a cluster investigation in the community • Asymptomatic contacts in long term care facilities with one or more lab confirmed cases including all residents and staff • Asymptomatic contacts of confirmed cases • Broaden testing outreach in community when cases have occurred in people who come from racial and minority ethnic groups disproportionately affected by adverse COVID-19 outcomes in underserved communities): • African Americans • Hispanics and Latinos • Native American Tribe if identified as disproportionately affected	Same day to days	1,000	• Home sampling • Temporary sites Healthcare facilities	High throughput, local or commercial laboratories	Implement public health measures per CDC guidelines. Serial testing when supplies are sufficient. Long-term Care Facilities recommendations are consistent with Strike Team guidance.

1	Conserve PPE	Patients not already known to be infected with COVID-19 before potential aerosol-generating procedure	Hours	10,000	Healthcare facility	• High throughput, local • POC	Apply to all non-emergent potential aerosol-generating procedures

Group C: Enhanced surveillance of asymptomatic people in sentinel populations (nucleic acid or antigen test)

Consistent with the federal guidelines to apply to certain subpopulations and prioritized according to OSHA risk-stratification guidelines.

Total Estimate: 101,250 per week (range 25,000-125,000)

Priority	Objective	Groups	TAT Need	Estimated Numbers	Proposed Collection Site	Proposed Testing Laboratory Type	Additional Notes
2	Early detection at critical locations	Congregate living facilities with most vulnerable populations (long-term care facilities, correctional facilities, residential care facilities, homeless shelters): residents and staff	Same day	LTF: 1,250 DOC: 9698 SNF: 3896 RALF: 10,746	On-site	• High throughput, local • POC	Priority 2 should include testing at regular intervals of asymptomatic HCP who reside or work in counties with known community spread of SARS-CoV-2 or who work in other healthcare facilities with cases of COVID-19.
2	Early detection in critical infrastructure or essential businesses with higher transmission risk	Employees of critical infrastructure or essential businesses in congregate settings, especially those working in close proximity with suboptimal ventilation (e.g., meat packing plant)	Same day	250	Home or on-site	High throughput, local	OSHA medium risk category, PPE likely inadequate
3	Early detection in critical infrastructure or essential businesses with higher exposure risk	Employees of critical infrastructure or essential businesses with high volume public-facing working conditions (e.g., large retail grocers)	Same day	20,000			
3	Early detection in critical workforce at high risk who should be protected by PPE	Healthcare workers (especially providers of underserved populations) first responder teams, and mortuary staff	Same day	20,000	Facility	High throughput, local	OSHA high exposure risk category, PPE adequate
4	Early detection in population with potential for rapid spread	• Schools with congregate living conditions (e.g., dormitories or barracks) • Teachers in schools where classroom size exceeds 10 people	Same day	TBD	On-site	High throughput, local	OSHA medium risk category, not categorized as essential business

		• Daycares exceeding 10 children					
4	Early detection of community spread	Employees of non-essential businesses with congregate or public-facing working conditions (e.g., restaurants, high volume retail)	Days	60,000	Home or on-site	High throughput, local or commercial	OSHA medium risk category, not categorized as essential business

Group D: Screening of asymptomatic persons prior to participation in group events (e.g., group travel, sporting events, entertainment)

These are not included in current federal guidelines and are considered non-essential. Nonetheless, we believe that solutions should be developed for these important portions of our economy.

Total Estimate: 2,000 per week (range 1,250-5,000)

Priority	Objective	Groups	TAT Need	Estimated Numbers	Proposed Collection Site	Proposed Testing Laboratory Type	Additional Notes
4		Participants in group guided travel where cloth face coverings and maintaining physical distance of 6 feet apart is not practical (e.g., river rafting)	Hours	1,250	Designated testing sites around state based upon departure location	POC	Important part of Idaho economy. Consideration should be given to group size and presence of out-of-state travelers.
5		Athletes prior to any collision or contact sporting event (e.g., football, wrestling, basketball, martial arts)	Hours	750	Facility collection	POC	
5		Travelers returning from areas of community transmission via commercial carrier.	Same day	TBD	Airport and bus station or train depot collection site	High throughput, local	
5		Sporting Events	POCT if available				Symptom screening and temp check on entry, universal masking, POCT testing availability
5		Non-Contact Athlete/Performance Groups					No routine testing, but symptom checking apps, universal masking where

							able and social distancing practices

OSHA Risk Exposure Levels

OSHA has divided job tasks into four risk exposure levels: very high, high, medium, and lower risk, as shown in the occupational risk pyramid, below. The four exposure risk levels represent the probable distribution of risk. Most American workers will likely fall in the lower exposure risk (caution) or medium exposure risk levels.

Lower Exposure Risk (Caution)

Jobs that do not require contact with people known to be, or suspected of being, infected with SARS-CoV-2. Workers in this category have minimal occupational contact with the public and other coworkers. Examples include:

- Remote workers (i.e., those working from home during the pandemic).
- Office workers who do not have frequent close contact with coworkers, customers, or the public.
- Manufacturing and industrial facility workers who do not have frequent close contact with coworkers, customers, or the public.
- Healthcare workers providing only telemedicine services.
- Long-distance truck drivers.

Medium Exposure Risk

Jobs that require frequent/close contact with people who may be infected, but who are not known to have or suspected of having COVID-19. Workers in this category include:

- Those who may have frequent contact with travelers who return from international locations with widespread COVID-19 transmission.
- Those who may have contact with the general public (e.g., in schools, high population density work environments, and some high-volume retail settings).

High Exposure Risk

Jobs with a high potential for exposure to known or suspected sources of SARS-CoV-2. Workers in this category include:

- Healthcare delivery and support staff (hospital staff who must enter patients' rooms) exposed to known or suspected COVID-19 patients.
- Medical transport workers (ambulance vehicle operators) moving known or suspected COVID-19 patients in enclosed vehicles.
- Mortuary workers involved in preparing bodies for burial or cremation of people known to have, or suspected of having, COVID-19 at the time of death.

Very High Exposure Risk

Jobs with a very high potential for exposure to known or suspected sources of SARS-CoV-2 during specific medical, postmortem, or laboratory procedures. Workers in this category include:

- Healthcare workers (e.g., doctors, nurses, dentists, paramedics, emergency medical technicians) performing aerosol-generating procedures (e.g., intubation, cough induction procedures, bronchoscopies, some dental procedures and exams, or invasive specimen collection) on known or suspected COVID-19 patients.
- Healthcare or laboratory personnel collecting or handling specimens from known or suspected COVID-19 patients (e.g., manipulating cultures from known or suspected COVID-19 patients).
- Morgue workers performing autopsies, which generally involve aerosol-generating procedures, on the bodies of people who are known to have, or are suspected of having, COVID-19 at the time of their death.